AMENDMENTS TO THE CLAIMS

1. (Currently Amended)   A computer readable storage medium storing computer executable instructions that when executed on a processor manage a graphical interface, the medium storing:

instructions for providing a graphical interface, a hardware device and a software device being accessible through the graphical interface, the software device being accessible to a computer;

instructions for providing at least one interactive hardware object accessible to the computer, where the hardware object represents the hardware device and is depicted in the graphical interface, the hardware object interacting with the hardware device;

instructions for providing a software object, wherein the software object is representative of the software device, where the software object is depicted in the graphical interface and is configured to be interactive with the software device;

instructions for receiving, from a user, a plurality of configurations of the hardware device, each configuration allowing the user to edit at least one property of the hardware object; and

instructions for displaying the plurality of configurations simultaneously, wherein each configuration corresponds to a unique hardware object that represents the hardware device;

instructions for receiving, from a user, a selection of one configuration from the plurality of configurations; and

instructions for communicating with the hardware device corresponding to the selected configuration using the selected configuration.

2. (Canceled)

3. (Previously Presented)   The computer readable storage medium of claim 1, further comprising providing an analysis object, wherein said analysis object is adapted to communicate with at least one of said hardware object and said software object for analysis of data from at least one of said hardware object and said software object.

4. (Previously Presented)   The computer readable storage medium of claim 1, further comprising:

     instructions for receiving code for execution by the hardware object.

5. (Previously Presented)   The computer readable storage medium of claim 1, wherein a plurality of hardware objects are provided for a single hardware device.

6. (Previously Presented)   The computer readable storage medium of claim 1, wherein a plurality of hardware objects are provided for a plurality of hardware devices.

7. (Previously Presented)   The computer readable storage medium of claim 1, further comprising:

     instructions for scanning for available hardware; and

     instructions for creating an additional hardware object for each hardware device detected and not already associated with a hardware object.

8. (Previously Presented)   The computer readable storage medium of claim 7, wherein instructions for scanning involves instructions for receiving user-defined commands to be sent to the hardware device to attempt to identify the hardware device.

9. (Previously Presented)   The computer readable storage medium of claim 3, wherein the analysis object filters data.

10. (Previously Presented)   The computer readable storage medium of claim 3, wherein the analysis object plots data.

11. (Canceled)

12. (Previously Presented)   The computer readable storage medium of claim 1, wherein at least one of instructions for providing at least one hardware object and providing at least one software object further comprises instructions for accessing at least one of a hardware object and a software object located on a remote computer.

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13. (Previously Presented)   The computer readable storage medium of claim 12, wherein instructions for accessing is performed through a web page.

14. (Previously Presented)   The computer readable storage medium of claim 12, wherein instructions for accessing is performed over a network.

15. (Previously Presented)   The computer readable storage medium of claim 14, wherein instructions for accessing is performed by passing commands over the network in a MATLAB environment.

16. (Previously Presented)   The computer readable storage medium of claim 1, further comprising:

      instructions for modifying at least one of the hardware object and the software object.

17. (Previously Presented)   The computer readable storage medium of claim 16, wherein modifying specifies a protocol for use by the hardware object for communication with the hardware device.

18. (Previously Presented)   The computer readable storage medium of claim 16, wherein modifying modifies a value stored in an array of an array-based environment.

19. (Previously Presented)   The computer readable storage medium of claim 1, further comprising:

      instructions for modifying a value stored in an array of an array-based environment, thereby modifying at least one of the hardware object and the software object.

20. (Previously Presented)   The computer readable storage medium of claim 1, further comprising:

      instructions for exporting data from the graphical interface to an array-based environment.

21. (Previously Presented)   The computer readable storage medium of claim 1, further comprising:

      instructions for converting user actions with the graphical interface into code.

22. (Previously Presented)   The computer readable storage medium of claim 21, wherein the code is created in a MATLAB environment.

23. (Previously Presented)   The computer readable storage medium of claim 21, wherein the code comprises steps to create an analysis object, configure the analysis object and write and read data from the analysis object.

24. (Previously Presented)   The computer readable storage medium of claim 21, wherein the code comprises an analysis routine.

25. (Previously Presented)   The computer readable storage medium of claim 1, wherein the graphical interface is implemented with an extensible API.

26. (Previously Presented)   The computer readable storage medium of claim 1, further comprising:

      instructions for generating an analysis object so that the analysis object can be used in MATLAB.

27. (Previously Presented)   The computer readable storage medium of claim 1, further comprising:

      instructions for generating an analysis object that can be used in SIMULINK.

28. (Previously Presented)   The computer readable storage medium of claim 1, wherein the graphical interface is adapted to operate on a plurality of operating systems.

29. (Previously Presented)   The computer readable storage medium of claim 1, wherein the graphical interface comprises a tree view, wherein the tree view groups the hardware objects and the software objects by a functionality characteristic.

30. (Currently Amended)   A method for managing an interface, the method comprising:

providing a graphical interface that provides interaction with an array-based environment, a hardware device and a software device being accessible through the graphical interface, the software device being accessible to a computer;

providing at least one hardware object accessible to the computer, where the hardware object represents the hardware device and is depicted in the graphical interface, the hardware object configured to be interactive with the hardware device;

providing at least one software object, representative of the software device, where the software object is depicted in the graphical interface, and is configured to be interactive with the software device and;

updating the graphical interface being updated in response to a change in when the hardware object or the software object are changed in the array-based environment; and

displaying the hardware object and the software object to a user.

31. (Previously Presented)   The method of claim 30, further comprising:

receiving code for execution by the hardware object.

32. (Previously Presented)   The method of claim 30, wherein at least one additional hardware object is provided for the hardware device.

33. (Previously Presented)   The method of claim 30, wherein additional hardware objects are provided for a plurality of hardware devices.

34. (Previously Presented)   The method of claim 30, further comprising:

scanning for available hardware; and

creating a hardware object for each hardware device detected and not already associated with a hardware object.

35. (Previously Presented)   The method of claim 34, wherein scanning involves the step of receiving user-defined commands to be sent to the hardware device to attempt to identify the hardware device.

36. (Previously Presented)   The method of claim 30, further comprising:

      providing an analysis object adapted to communicate with at least one of the hardware object and the software object.

37. (Canceled)

38. (Previously Presented)   The method of claim 30, wherein at least one of providing at least one hardware object and providing at least one software object further comprises accessing at least one of a hardware object and a software object located on a remote computer.

39. (Previously Presented)   The method of claim 30, further comprising:

      modifying at least one of the hardware object and the software object.

40. (Previously Presented)   The method of claim 39, wherein modifying specifies a protocol for use by the hardware object for communication with the hardware device.

41. (Previously Presented)   The method of claim 39, wherein modifying modifies a value stored in an array of an array-based environment.

42. (Previously Presented)   The method of claim 30, further comprising generating an analysis object that can be used in MATLAB.

43. (Previously Presented)   The method of claim 30, further comprising generating an analysis object that can be used in SIMULINK.

44. (Currently Amended)   A computing device comprising:

      <u>an array-based environment;</u>

      a storage medium for storing and a processor for processing:

            a graphical interface, at least one hardware device and one software device being accessible through the graphical interface;

a plurality of hardware objects accessible to the computer, where each of the hardware objects represents a hardware device and is depicted in the graphical interface, each hardware object configured to be interactive with the hardware device;

a plurality of software objects, each representative of a software device accessible to the computer, where each of the software objects is depicted in the graphical interface and is configured to be interactive with the software device; and

a display device to display the plurality of hardware objects and the plurality of software objects and at least one configuration of one of the hardware objects or one of the software objects to a user in a single graphical interface simultaneously, wherein the plurality of hardware objects and the plurality of software objects are accessible through both the array-based environment and the graphical interface.

45. (Previously Presented)   The computing device of claim 44, wherein the system receives code for execution by the hardware objects.

46. (Previously Presented)   The computing device of claim 44, wherein a plurality of hardware objects are provided for a single hardware device.

47. (Previously Presented)   The computing device of claim 44, wherein a plurality of hardware objects are provided for a plurality of hardware devices.

48. (Previously Presented)   The computing device of claim 44, wherein the processor scans for available hardware, and creates a hardware object for each hardware device detected and not already associated with a hardware object.

49. (Previously Presented)   The computing device of claim 48, wherein the processor scans by receiving user-defined commands to be sent to the hardware device to attempt to identify the hardware device.

50. (Previously Presented)   The computing device of claim 44, wherein an analysis object is provided adapted to communicate with at least one of the hardware objects and the software objects.

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51. (Canceled)

52. (Previously Presented)   The computing device of claim 44, wherein at least one of the hardware objects and the software objects are located on a remote computer.

53. (Previously Presented)   The computing device of claim 44, at least one of the hardware objects and the software objects are modified by the processor.

54. (Previously Presented)   The computing device of claim 44, wherein at least one of the hardware objects and the software objects are modified by the processor such that a protocol is specified for use by the at least one of the hardware objects for communication with the hardware device.

55. (Previously Presented)   The computing device of claim 44, wherein at least one of the hardware objects and the software objects are modified by the processor such that a value is stored in an array of an array-based environment.

56. (Previously Presented)   The computer readable storage medium of claim 1, wherein the hardware object enables communication between the graphical interface and the hardware device, and the software object enables communication between the graphical interface and the software device.

57. (Previously Presented)   The method of claim 30, wherein the hardware object enables communication between the graphical interface and the hardware device, and the software object enables communication between the graphical interface and the software device.

58. (Previously Presented)   The computing device of claim 44, wherein the hardware object enables communication between the graphical interface and the hardware device, and the software object enables communication between the graphical interface and the software device.

59. (Currently Amended)   A computer readable storage medium storing computer executable instructions that when executed on a processor manage a graphical interface, the medium storing:

instructions for providing a graphical interface, at least one hardware device and one software device being accessible through the graphical interface, the graphical interface being updated in response to a change in the hardware device or the software device;

instructions for providing a plurality of hardware objects accessible to the computer, where each of the hardware objects represents a hardware device and is depicted in the graphical interface, each hardware object configured to be interactive with the hardware device;

instructions for providing a plurality of software objects, each representative of a software device accessible to the computer, where each of the software objects is depicted in the graphical interface and is configured to be interactive with the software device;

instructions for providing a plurality of configurations of the hardware object, each configuration allowing the user to edit at least one property of the hardware object;

instructions for displaying the plurality of hardware objects and the plurality of software objects and at least one of the plurality of configurations of one of the hardware objects or one of the software objects to a user in a single graphical interface simultaneously;

instructions for receiving, from a user, a selection of a one configuration from the plurality of configurations; and

instructions for communicating with the hardware device corresponding to the selected configuration using the selected configuration.